

## MEMORANDUM

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TO: Files  
FROM: Stan Isley S.I.  
SUBJECT: Kittitas County Landfills and Dumps - Preliminary  
Data Gathered - Summer 1980  
May 15, 1981  
DATE:

State of  
Washington  
Department  
of Ecology



1. East Kittitas - county site, landfill, old site closed and reopened as interim site. Visited July 30, 1980.
2. Ryegrass - new site (operating). Visited July 30, 1980.
3. Old Roslyn Dump - closed, six acres, fill depth 60 feet. Visited July 30, 1980.
4. Old Landfill, Horlick Road - landfill closed by court action, suit. Visited July 30, 1980.
5. Thorp Site, Fields Dump - Enforcement action taken, still active (October 24, 1980), car hulks, appliances, demolition wastes, dumping occurring in and on the banks of a ditch, distributary, man-made I believe, of the Yakima River on north side of Thorp. NW $\frac{1}{4}$ NW $\frac{1}{4}$  of Sec. 11, T. 18 N., R. 17 E.W.M.
6. Promiscuous Dump - in and around a half dozen ponds just off the Woodside Road south of Ellensburg.
7. Keechelus Dump - closed July 1, 1971, midway between Keechelus Lake and Lake Kachess on the Cooper Pass Road. T. 21 N., R. 12 E.W.M. Didn't visit as of August 20, 1980.
8. Kachess Dump #3 (Easton) - located west of Easton on the Lake Kachess Dam turnoff, hidden from view of I-90, closed, two acres in size, fill depth 10 feet. T. 21 N., R. 13 E.W.M. No visit as of August 20, 1980. At exit 70 Sparks Road (off I-90) go past the transmission lines at logging road to the right. A second Kachess dump is located at Kachess Lake Road (exit off I-90). At the exit on the north side of the freeway, closed and covered.
9. Vantage Dump - on state park land, hidden, two acres in size, fill depth 10 feet, closed. T. 17 N., R. 22 E.W.M.
10. Teanaway Dump - two acres, fill depth 10 feet, located at junction of Middle Fork Teanaway Road and West Fork Teanaway Road northeast of Cle Elum, closed. T. 21 N., R. 15 E.W.M.

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11. Cle Elum Dump - ten acres, closed, along Yakima River. Visited July 30, 1980.
12. Old West Ellensburg Dump - 40 acres, along Yakima River. Visited July 30, 1980.
13. Easton Woodwaste Site - on East or West Nelson Road.
14. Ellensburg STP Sludge Spraying - on nearby industrial land.

1973 SW Management plan notes 10 open dumps in 1½ hours of flying time.

SI:sgf

## I. Background and Conclusions

Kittitas County, Washington, on February 25, 1971, established a Technical Committee to study the problems of solid waste disposal and to develop a Solid Waste Management Plan, as required by Washington State law, RCW 7095. Recommendations as to where, how, and costs of various landfill sites was the first objective of the Committee.

Utilizing the concept of one County-wide disposal site, the Horlick site was found to be the most economical. As the Horlick site evolved as the probable site for a landfill, the Kittitas County Commissioners requested an in-depth analysis as to the suitability of the site.

On August 7, 1972, preliminary work to assure the suitability of the Horlick site was initiated. In-depth soils testing got underway on August 17, 1972. All test borings were accomplished under the supervision of R.C. Washburn, P.E., with the Washington State Highway Department.

Brief observations and conclusions pertaining to the area in question and to the boring tests are as follows:

1. The Horlick site is situated within a large glacial moraine deposit.
2. Wind or water have not extensively reworked the material of this area, which is therefore still in a generally non-stratified undifferentiated condition. This means a layer or zone of any particular soil type is not continuous over long distances.
3. Predominant soil types are AASHO classifications of A-2-4 and A-2-6 or Gravelly Silty Sand and Gravelly Clayey Sand respectively. A-2-4 appears to be predominant.

4. The in-situ material was found to have a low transmissability pertaining to the percolation of water. However, the material does allow percolation, both laterally and vertically, of water if a continuous hydrostatic head is maintained.
5. Water was not encountered in any of the borings. Most significant is boring #5, with the bottom of the hole at an elevation  $1972' \pm 5'$  above mean sea level.
6. Normal rainfall is assumed not to penetrate below the surface much in excess of 3.0 feet of this material when compacted to a density equal to that of the material as found in its natural state, that is, in-situ.

Analysis of the data submitted by the Washington State Highway Commission concerning the soils tests requested by Mr. Gordon Blossom, indicates that the Horlick site in Kittitas County is a suitable site for a sanitary landfill operation.

## II. Site Location

General location of the Horlick site is in the northeast quarter of section 30, Township 19 north, range <sup>17</sup>30 east. It is located on rolling pastureland east of Horlick Road.

Advantages of the site are that it is not zoned, it has sufficient soil that can be utilized for daily and final cover, is located in a remote area (sixteen miles from Ellensburg, and approximately 1/2-mile distant from the only residence in the area), and has a rated life of about 25 years.

Disadvantages are that a road must be constructed from Horlick Road to the site, it would be necessary to upgrade the tributary roads leading to the site, including Horlick Road, and it is located in an area that sustains heavy snowfalls, which would make it difficult for collection vehicles to operate on during inclement weather.

### III. Soils Analysis

A brief summary of each of the five soils borings made at the Horlick site, as derived from the logs of test borings, follows, as well as a tabulation of the moisture samples, liquid limits, plastic limits, plasticity index, and transmissability.

#### BORING ANALYSES

##### Hole #1

Approximately 8 feet of very dense material, silty sandy gravel.

No groundwater detected through 37 feet of borings.

Most material very dense through 37 feet of boring, except for a weakly cemented layer approximately two feet in width and from 9 to 10 feet below the surface.

Very low transmissibility; i.e., 7.5' of water lost in 19-1/2 hours (boring 37' x 5-1/2" diameter filled on 8/17/72 at 2:30 p.m. and measured on 8/18/72 at 10:00 a.m.).

Comments: Appears to be excellent material on which to construct a landfill. Low groundwater table coupled with low transmissibility preclude any possibility of landfill contaminants from migrating to and degrading any existing groundwater courses.

Requirements: Include in sanitary landfill operational criteria provisions for insuring adequate compaction of daily and/or final cover to achieve, as near as possible, a density equal to that as found in nature. Also, provisions for adequate drainage of surface waters (i.e., rainfall, irrigation, dust control, etc.), so as not to allow surface waters to penetrate the existing daily and/or final cover material.

#### Hole #2

Total depth of boring approximately 38 feet, with no groundwater encountered.

First 2' (approximately 1-1/2') silty sand and gravel.

From 1-1/2' to 38' silty sandy gravels, slightly clayey, very dense, and apparently moderately cemented.

Very low transmissibility (approximately 23' of water in 23 hours).

Comments and requirements: As for Hole Number 1.

#### Hole #3

Total depth of boring approximately 38 feet, with no groundwater encountered.

First 4' of soil, medium density, sandy silty material.

From 4' through 38', very dense, silty sandy gravel, moderately cemented.

Very low transmissibility.

Comments and requirements: Same as for Boring Number 1.

Hole #4

Total depth of boring approximately 38', with no groundwater encountered.

All 38' of boring very dense, silty, and sandy gravels.

Low transmissibility.

Comments and requirements: As per Boring Number 1.

Hole #5

Total depth of boring approximately 38', with no groundwater encountered.

From 0' to 13', very dense silty, sandy, slightly clayey, gravels.

From 13' to 38', very dense, moderately cemented, silty, sandy, gravels.

Low transmissibility.

Comments and Requirements: Same as for Boring Number 1.